

Astract of the Disclosure

The invention discloses the discovery that a pharmaceutical composition containing complex carbohydrates and natural or synthetic essential oils can work effectively as a topical pharmaceutical composition. Such pharmaceutical compositions reduce inflammation, assist in wound healing, protect against bruising, relieve itching, relieve pain and swelling and treat topical bacterial infections such as acne and decubitus ulcers. Such pharmaceutical compositions can be administered to mammals including humans. Also included in this invention are methods to deliver topically applied macromolecules into the tissue of mammals and methods of blocking the adhesion cascade.